



ABSTRACT

An example [[A]] spread spectrum communication system is provided in which a te
control the signal amplitude variation so as to alleviate the requirement of the linearity on an the
amplifier etc., thus allowing for use of a compact, low cost and energy saving transmitter. The
transmission signal is separated into an the I-phase component and a the Q-phase component. In
a complex spreading portion (301), spreading is performed by using multipliers (304 and 305)
and adders (302 and 303) together with a sequence pattern of 1 and -1 appearing alternately.
The outputs from the complex spreading portion (301) are modulated in multipliers (306 and
307) using pseudo-random sequences $PN^{(k)}(x)$ allotted for individual users. The baseband signal
undergoes which underwent waveform shaping by roll-off filters and (308 and 309) is modulated
through a carrier modulator (316), then sent to a power amplifier (315), where it is amplified and
transmitted via an antenna (317).